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(71) Applicant (for all designated States except US): MEDI-  
ASEC TECHNOLOGIES, GMBH [DE/DE]; Berliner  
Platz 6-8, 45127 Essen (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): PICARD, Justin

[CA/US]; 16 Mayflower Street, Providence, RI 02906  
(US). ZHAO, Jian [CN/US]; 130 New Road, Rumford,  
RI 02916 (US).

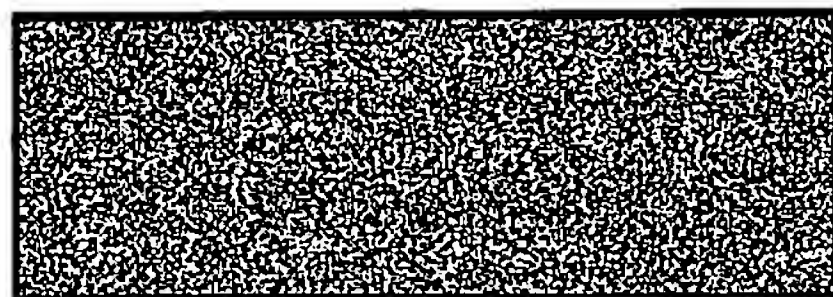
(74) Agent: NELSON, Gordon, E.; 57 Central Street, P.O.  
Box 782, Rowley, MA 01969 (US).

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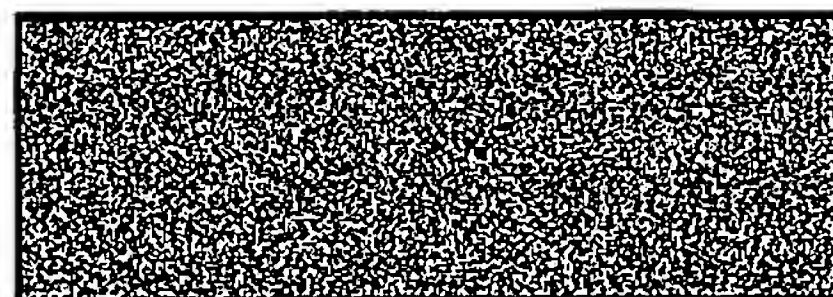
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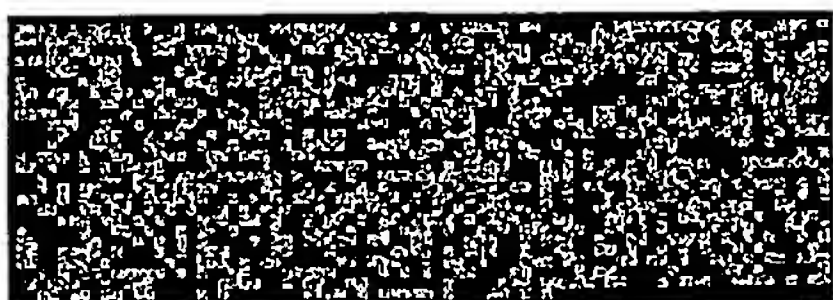
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1201



1203



1205

(57) Abstract: Improved techniques for making copy  
detection patterns and using them to detect copying re-  
lationships between digital representations. The tech-  
niques include techniques for including a message in  
a copy detection pattern without altering the copy de-  
tection patterns entropy and reading the message, tech-  
niques for using a copy detection pattern on an analog  
form to determine whether the analog form is an origi-  
nal analog form without reference to a digital represen-  
tation of the original of the analog form's copy detec-  
tion pattern, techniques for increasing the sensitivity of  
copy detection using copy detection patterns by mod-  
ifying one of two copy detection patterns that are be-  
ing compared to take into account alterations resulting  
from the copying process, techniques for distributing  
a copy detection pattern across a document, and tech-  
niques for using the entropy of a copy detection pat-  
tern to locate the copy detection pattern. Also disclosed  
are applications of copy detection patterns with copying  
that involves transformations between the digital and  
analog forms and with digital-to-digital copying.



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